

CLAIMS

We claim:

SUB A17

1. A method of managing a data system designed to ensure the integrity of data and a file system designed to manage files, comprising the steps of:
 - (a) ensuring data from an external sources is received by the data system;
 - (b) ensuring the data is copied from the data system to the file system; and
 - (c) interpreting metadata to ensure data integrity is maintained during the copying of data from the data system to the file system.
2. The method of claim 1 wherein the data system that is designed to ensure the integrity of the data is a relational database following ACID protocols.
3. The method of claim 2 wherein the metadata is stored in the relational database.
4. The method of claim 1 wherein the step of receiving the data is performed through a communications device from an external source.
5. The method of claim 1 further comprising the step of:
 - (d) directing a request to retrieve the data to:
the data system when the request is made prior to when the metadata indicates
that the step of copying the data to the file system has been completed;
or
the file system after the metadata indicates that the step of copying the data to
the file system has been completed.

- 1 6. The method of claim 5 further comprising the steps of:
2 (e) ensuring the data is backed up; and
3 (f) ensuring the data on the data system is deleted after the metadata indicates
4 that the step of copying the data to the file system has been completed.
- 1 7. The method of claim 1 further comprising the step of using the metadata to determine
2 whether a request to retrieve the data should be directed to the file system.
- 1 8. The method of claim 1 wherein the metadata includes information concerning
2 location of a most recent version of the data and the step of using the metadata.
- 1 9. The method of claim 8 further comprising the step of using the information
2 concerning location to determine where a request to retrieve the data should be directed.
- 1 10. The method of claim 3 wherein the integrity of the data is ensured during copy,
2 transfer, delete, wipe, rename, and backup operations through use of the metadata.
- 1 11. The method of claim 3 wherein the integrity of the data is ensured during copy,
2 transfer, delete, wipe, rename, and backup operations through use of the metadata by using
3 minimum ACID protocols.
- 1 12. The method of claim 1 further comprising the step of applying a filter to the data
2 during the step copying the data from the data system to a file system.

1 13. The method of claim 12 wherein the filter is either an anti-virus filter, an access-
2 control filter or a security filter, or some combination thereof.

1 14. A method for storing data, comprising the steps of:

- 2 (a) initially receiving the data into a data system that is designed to ensure the
3 integrity of the data;
4 (b) copying the data from the data system to a file system, designed to manage
5 files, using protocols that ensure the integrity of data during the copying; and
6 (c) creating metadata that can be used to ensure the integrity of the data and
7 describe and track the state and location of the data.

1 15. A method of transferring data between a first system and a second system while
2 ensuring the integrity of the data, comprising the steps of:

- 3 (a) using metadata to determine when the data transfer is in progress;
4 (b) using metadata to determine when the data transfer has been successfully
5 completed; and
6 (c) using the metadata to indicate when rollback procedures can be initiated from
7 a backup.

1 16. The method of claim 16 further comprising the step of directing a request to access
2 the data to the second system when the metadata indicates that a data transfer has been
3 successfully completed.

1 17. The method of claim 16 further comprising the step of directing a request to access
2 the data to the first system when the metadata does not indicate that a data transfer has been
3 successfully completed.

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